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OBJECTIVES: To analyze the effects of pre-existing substance use on complications in Medicare elderly prostate cancer patients treated with radical prostatectomy. **METHODS:** We used SEER-Medicare linked database to identify men diagnosed with prostate cancer between 2000 and 2009 and treated with radical prostatectomy, we identified those with a pre-existing diagnosis of substance use (ICD-9 codes: Alcohol dependence syndrome-303.xx, Drug dependence 304.xx and Non-dependent abuse of drugs 305.xx). Seven mutually exclusive complications related to radical prostatectomy (respiratory, cardiac, vascular, wound/bleeding, genitourinary, miscellaneous medical and surgical) were identified in the sixty days post-radical prostatectomy. Number of complications is modeled as a factor of pre-existing substance use, after controlling for socio-demographic and clinical characteristics using Poisson regression. We also analyzed the effects of specific types of substance use on complications. **RESULTS:** Of the 33,148 men treated with radical prostatectomy, 6.01% had a pre-existing diagnosis of substance use. Complications within sixty days of radical prostatectomy were higher for those with pre-existing substance use (OR=1.34; CI=1.25-1.44), compared to those without. In particular, drug dependence had the highest impact on complications (OR= 4.12; CI=2.86-5.94), compared to alcohol and non-dependent abuse of drugs. **CONCLUSIONS:** Complications related to radical prostatectomy are significantly affected by pre-existing substance use in elderly prostate cancer patients. Also, this affect varies by type of substance use. Complications are an important indicator of quality of care and thus, our results emphasize the need to for early diagnosis and effective treatment of substance use, especially drug dependence, in elderly prostate cancer patients.

PHS83
SUBSTANCE ABUSE AND QUALITY OF CARE IN NON-MUSCLE INVASIVE BLADDER CANCER PATIENTS

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OBJECTIVES: To analyze association between substance abuse and quality of care in Medicare fee-for-service elderly with non-muscle invasive bladder cancer. **METHODS:** Retrospective case control design using SEER-Medicare databases. Non-muscle invasive bladder cancer patients diagnosed between 2001-2004 were identified. From this, we identified those with and without a diagnosis of substance abuse (ICD-9 codes: Alcohol dependence syndrome-303.xx, Drug dependence 304.xx and Non-dependent abuse of drugs 305.xx). The groups were retrospectively followed for one year pre and five years post diagnosis. Effect of substance abuse on quality of care (ER, inpatient and outpatient visits) and cost was analyzed after adjusting for clinical and demographic variables. To compute incremental cost of non-muscle invasive bladder cancer, cancer free controls were selected (matched by age, gender, ethnicity) from Medicare. Poisson regression and GLM log-link models were used to analyze the association of substance abuse with health resource utilization and cost. Propensity score approach was used to minimize bias. **RESULTS:** A total of 33,396 patients with non-muscle invasive bladder between 2001 and 2004 we identified. Average age was 76.7 years (std 7.2), 88% were white, 73% were male, and 61% were married. Substance abuse prevalence was 15.96%. Compared to those no substance abuse, the substance abuse group had higher odds of ER (OR=1.56, CI=1.48-1.63), inpatient (OR=1.17, CI=1.14-1.19) and outpatient visits (OR=1.37, CI=1.35-1.39) in the one year post-dignosis period. Compared to no substance abuse group, the substance abuse group had higher total cost.We observed comparable results in the five year follow-up period. **CONCLUSIONS:** Substance abuse appears to affect quality of care and cost among elderly with non-muscle invasive bladder cancer. Further research is necessary to study the impact of interventions, early diagnosis and treatment of substance abuse in elderly bladder cancer patients to improve quality of care through care coordination.

PHS84
IMPACT OF PRIMARY CARE AVAILABILITY ON HOSPITAL INPATIENT USE BY INSURANCE STATUS

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OBJECTIVES: Reducing avoidable hospitalizations is a major target of recent health care reform efforts. Increasing the supply of primary care providers has been proposed as one way to reduce hospitalizations. There is little empirical evidence, however, that has linked increased availability of primary care to reduced hospitalizations. Further, it is unknown if primary care availability has the same effect on hospitalization rates for the uninsured as the insured. The purpose of this study is to examine the association between primary care availability, all-cause hospitalizations, and admissions for three common types among nonelderly adults (ambulatory care sensitive conditions, mental health and substance abuse, and mandatory admissions). **METHODS:** Using data from the 2009 Healthcare Cost and Utilization Project (HCUP) State Inpatient Databases (SID) we examined variations in inpatient hospitalizations between the insured and uninsured across Core Based Statistical Areas (CBSAs) in 44 states. We also explored the association between primary care availability and hospital use by insurance status while controlling for patient, population and market factors using a broad definition of primary care. Poisson regression models were used to estimate the relationship between primary care availability and the rate of hospitalizations by insurance status. **RESULTS:** Primary care supply is generally linked to lower hospitalizations across conditions. Areas with more community health centers and rural health clinics were linked to greater hospital use among the uninsured. **CONCLUSIONS:** The findings from our study highlight some of the complexities and nuanced relationship between the supply of primary care providers and hospitalizations by insurance status. The availability of primary care alone may not be enough to reduce the differences in hospital use. Policies that take into consideration the availability of primary care in addition to issues of accessibility, appropriateness, and effectiveness may mitigate differences in hospital utilization between populations.

PHS85
EFFECTIVENESS OF PAY-FOR-PERFORMANCE IN HEALTH CARE–A SYSTEMATIC REVIEW

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OBJECTIVES: Numerous studies have revealed that many health care systems can be characterized by ineffectiveness and inefficiency. One approach to improve the quality of health care that has become increasingly popular is Pay-for-Performance (P4P). P4P links payments to performance on predefined quality measures. To date, P4P has become a part of several health care systems. However, previous published studies evaluating P4P programs show that the effects are heterogenic and conclude that P4P has the potential to enhance quality of health care. Therefore, this analysis aims at assessing P4P effectiveness and success factors of prospective programs. **METHODS:** A systematic literature search on P4P-reviews published between 2000 and 2012 was conducted in PubMed and Cochrane Database of Systematic Reviews. The literature searches provided 297 citations for inclusion. After different exclusion steps (title, abstract, and full-text screening) and an additional hand search, nine reviews were included. The literature search is based on the recommendations of Cochrane Collaboration and the Institute for Quality and Efficiency in Health care. The methodological quality of each review was assed using the AMSTAR-checklist. **RESULTS:** In sum, reviews analyse 75 different primary studies. Most of the studies focus on the US (47) and the UK (19). In 60 evaluations, primary studies are categorised as having positive effects. P4P is linked to negative results in 16 studies. Nevertheless, in 61 cases the results are assessed to have positive and negative effects. Success factors of P4P programs contain of three key issues: (1) What to incentivize: Dimensions of performance; (2) Whom to incentivize: Individuals or groups; (3) How to incentivize: Rewards or penalties/ incentive size/absolute or relative performance/frequency and duration. **CONCLUSIONS:** Reviews confirm that P4P can improve quality of care, though not always. Therefore, financial incentives have to be designed and implemented carefully. Better-designed studies are needed to determine success factors for quality improvement.

PHS86
DEVELOP AND VALIDATE A RISK INDEX TO PREDICT 30 DAYS EMERGENCY HOSPITAL READMISSION

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OBJECTIVES: Emergency hospital readmissions are costly to the health care system. Identifying high-risk patients and targeting intensive post-discharge interventions may help reduce readmissions. Thus, this study aims to develop and validate a predictive model to score patients' risk of emergency hospital readmission in an acute hospital in Singapore. **METHODS:** In a retrospective cohort study, data were collected for medical patients discharged from Alexandra Hospital between August 2011 and December 2011. We identified potential risk factors based on the variables used in the "LACE" index and "HARRPE" model. Using a split-sample design, we constructed logistic regression models to predict readmission or death within 30 days. A risk index was then developed to score the readmission risk using the methods described by Sullivan et al. The C-statistic was used to measure discriminative ability and the Hosmer–Lemeshow goodness-of-fit test was used for calibration. **RESULTS:** Of 3175 patient discharges, 20.3% were readmitted to hospital or died within 30 days of discharge. The variables independently associated with the outcome included admissions in previous one year, number of comorbidities, emergency department visits in previous six months and length of stay. The risk score was discriminative (C-statistics 0.763, 95% CI: 0.737-0.788) and accurate (Hosmer–Lemeshow statistic 11.46, p=0.177) at predicting outcome risk. The expected risk ranged from 4.3% (score 0) to 65.3% (score 18). The optimal cut-off score that maximized sensitivity and specificity was six. High-risk patients (score ≥6) accounted for 32.0% of the sample, and had four times the risk of readmission or death within 30 days compared with other patients (score <6). **CONCLUSIONS:** Our findings provide an evidence-based tool to enable the early identification of high-risk patients in Singapore. This can be embedded in electronic medical records to alert clinicians of high-risk patients who may require intensive post-discharge intervention to avoid readmission.

PHS87
UTILIZATION OF HOME CARE (NURSING) SERVICES IN HUNGARY

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OBJECTIVES: Home care (nursing) was introduced into the Hungarian basic health insurance package in 1996. The aim of our study is to analyze